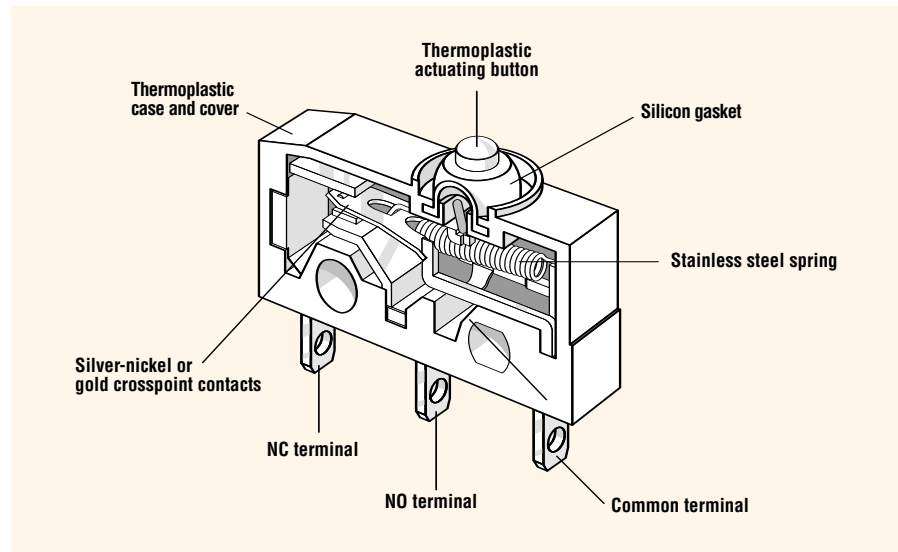


# SUBMINIATURE — SEALED

# DC Series

## Features

- Enclosed switch complying with IP 6K7
- Silicon-free version available
- Models available for operating temperatures up to 120°C
- Rated for currents up to 10 amp at 250VAC
- Range of auxiliary actuators available (can also be retrofitted)
- Various contact materials available, depending on application
- Mechanical life: min. 1 x 10<sup>6</sup> operations
- Wide variety of connection options



## Electrical Ratings

| Switch Series | EN61058 Rating  | UL1054 Rating                    | Electrical Life at Rated Load     |                                   |
|---------------|-----------------|----------------------------------|-----------------------------------|-----------------------------------|
|               |                 |                                  | According to EN (Min. Operations) | According to UL (Min. Operations) |
| DC1           | 6A, 250V~       | 5A, 125/250VAC; 1A, 48VDC        | 10,000                            | 6,000                             |
| DC2           | 10(1.5)A, 250V~ | 10.1A, 125/250VAC; 1/4HP, 125VAC | 10,000                            | 6,000                             |
| DC3           | 0.1A, 250V~     | 0.1A, 125/250VAC                 | 50,000                            | 6,000                             |
| DC4           | 3A, 250V~       | 3A, 125/250VAC                   | 50,000                            | 6,000                             |

## Specifications

### Electrical

Temperature Rating: -40° to +85°C / +120°C (without wire leads)  
-40° to +85°C / +105°C (with wire leads)

Flammability Rating: UL94V-O (PET, PBT)  
UL94HB (POM)

### Materials















Case: PET / PBT  
 Actuator: POM (T85), PBT (T120)  
 Auxiliary Actuator: Stainless Steel or Plastic  
 Terminals: Silver-Plated Copper-Zinc  
 Contacts: Silver Alloy (DC3 — Gold Crosspoint)

PBT = Polybutyleneterephthalate • PET = Polyethyleneterephthalate • POM = Polyacetal

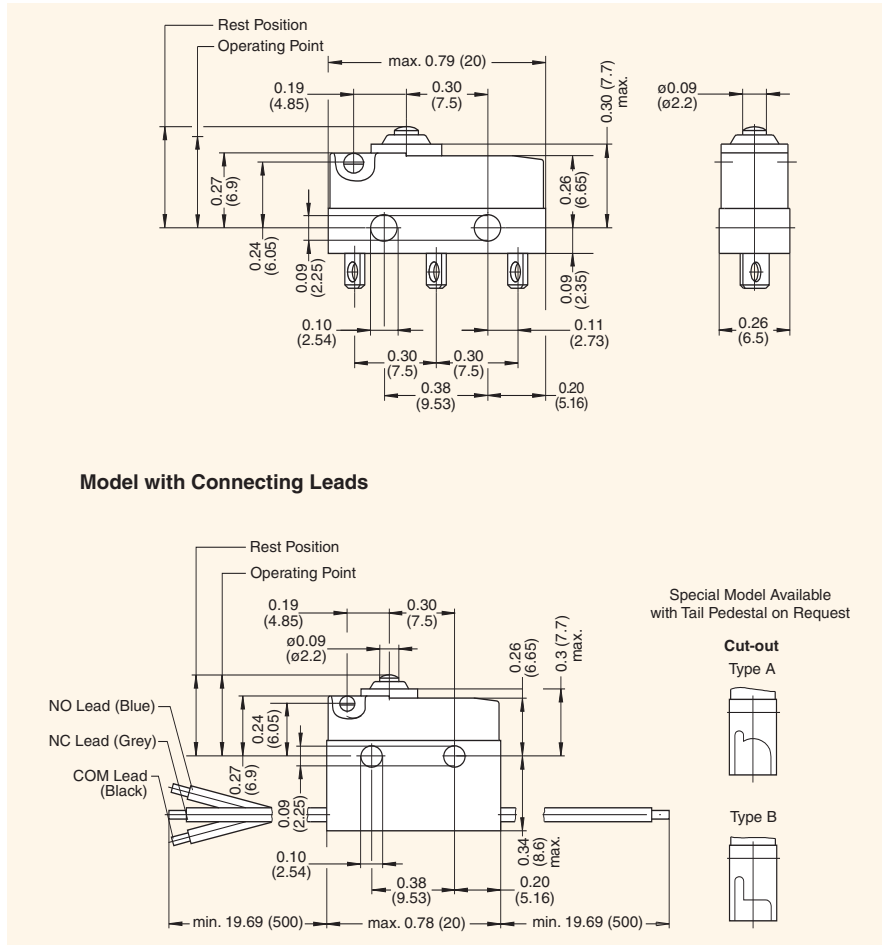


## Auxiliary Actuators inches (mm)

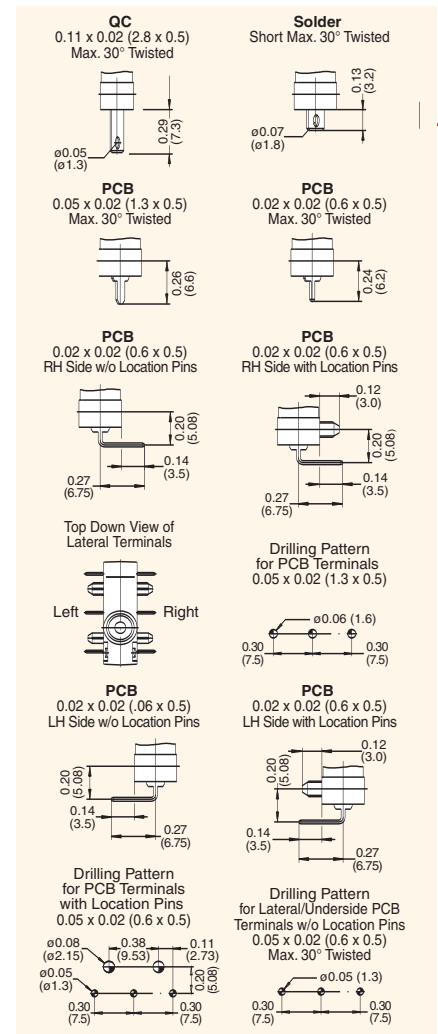
### Actuator Specifications

| Actuator Code | Switch Type   | Maximum Operating Force (cN)                    |     | Maximum Pre-Travel inches (mm) |               | Operating Point inches (mm) |                         | Minimum Over-Travel inches (mm) | Max. Movement Differential inches (mm) |                 | Max. Rest Position inches (mm) | Actuation Length inches (mm) |
|---------------|---|---|-----|--------------------------------|---------------|-----------------------------|-------------------------|---------------------------------|--|-----------------|--------------------------------|------------------------------|
|               |   | DC1, DC3, DC4                                   | DC2 | DC1, DC3, DC4                  | DC2           | DC1, DC3, DC4               | DC2                     |                                 | DC1, DC3, DC4                          | DC2             |                                |                              |
| AA            |  | 200   | 340 | 0.04<br>(1.0)                  | 0.04<br>(1.0) | 0.33±0.01<br>(8.4±0.3)      | 0.33±0.01<br>(8.4±0.3)  | 0.02<br>(0.6)                   | 0.004<br>(0.10)                        | 0.004<br>(0.10) | 0.37<br>(9.3)                  | —                            |
| LB            |  | 80  | 150 | 0.18<br>(4.5)                  | 0.20<br>(5.0) | 0.42±0.05<br>(10.7±1.3)     | 0.42±0.06<br>(10.7±1.6) | 0.06<br>(1.5)                   | 0.02<br>(0.5)                          | 0.03<br>(0.7)   | 0.55<br>(14.0)                 | 0.189<br>(4.8)               |
| LC            |  | 70  | 120 | 0.20<br>(5.0)                  | 0.22<br>(5.5) | 0.44±0.06<br>(11.1±1.5)     | 0.44±0.07<br>(11.1±1.8) | 0.06<br>(1.5)                   | 0.02<br>(0.6)                          | 0.04<br>(1.0)   | 0.59<br>(15.0)                 | 0.276<br>(7.0)               |
| LD            |  | <i>forces and travel available upon request</i> |     |                                |               |                             |                         |                                 |  |                 |                                | 1.654<br>(42.0)              |
| SB            |  | 90  | 160 | 0.18<br>(4.5)                  | 0.20<br>(5.0) | 0.63±0.05<br>(16.0±1.3)     | 0.63±0.06<br>(16.0±1.6) | 0.06<br>(1.5)                   | 0.02<br>(0.5)                          | 0.03<br>(0.7)   | 0.75<br>(19.0)                 | 0.098<br>(2.5)               |
| SC            |  | 80  | 130 | 0.20<br>(5.0)                  | 0.22<br>(5.5) | 0.65±0.06<br>(16.4±1.5)     | 0.65±0.07<br>(16.4±1.8) | 0.06<br>(1.5)                   | 0.02<br>(0.6)                          | 0.04<br>(1.0)   | 0.79<br>(20.0)                 | 0.185<br>(4.7)               |
| SD            |  | <i>forces and travel available upon request</i> |     |                                |               |                             |                         |                                 |  |                 |                                | 1.563<br>(39.7)              |
| RB            |  | 90  | 160 | 0.18<br>(4.5)                  | 0.20<br>(5.0) | 0.62±0.05<br>(15.8±1.3)     | 0.62±0.06<br>(15.8±1.6) | 0.06<br>(1.5)                   | 0.02<br>(0.5)                          | 0.03<br>(0.7)   | 0.75<br>(19.0)                 | 0.098<br>(2.5)               |
| RC            |  | 80  | 130 | 0.20<br>(5.0)                  | 0.22<br>(5.5) | 0.64±0.06<br>(16.2±1.5)     | 0.64±0.07<br>(16.2±1.8) | 0.06<br>(1.5)                   | 0.02<br>(0.6)                          | 0.04<br>(1.0)   | 0.79<br>(20.0)                 | 0.185<br>(4.7)               |
| RD            |  | <i>forces and travel available upon request</i> |     |                                |               |                             |                         |                                 |  |                 |                                | 1.563<br>(39.7)              |
| WB            |  | 68  | 115 | 0.18<br>(4.5)                  | 0.18<br>(4.5) | 0.44±0.06<br>(11.1±1.5)     | 0.44±0.06<br>(11.1±1.5) | 0.08<br>(2.0)                   | 0.02<br>(0.6)                          | 0.02<br>(0.6)   | 0.59<br>(15.0)                 | 0.276<br>(7.0)               |
| WC            |  | 50  | 85  | 0.24<br>(6.0)                  | 0.24<br>(6.0) | 0.48±0.07<br>(12.2±1.8)     | 0.48±0.07<br>(12.2±1.8) | 0.12<br>(3.0)                   | 0.03<br>(0.8)                          | 0.03<br>(0.8)   | 0.67<br>(17.0)                 | 0.551<br>(14.0)              |
| VB            |  | 73  | 125 | 0.18<br>(4.5)                  | 0.18<br>(4.5) | 0.47±0.06<br>(11.9±1.4)     | 0.47±0.06<br>(11.9±1.4) | 0.08<br>(2.0)                   | 0.02<br>(0.6)                          | 0.02<br>(0.6)   | 0.59<br>(15.0)                 | 0.220<br>(5.6)               |
| ZB            |  | 73  | 125 | 0.18<br>(4.5)                  | 0.18<br>(4.5) | 0.63±0.06<br>(16.0±1.4)     | 0.63±0.06<br>(16.0±1.4) | 0.06<br>(1.5)                   | 0.02<br>(0.6)                          | 0.02<br>(0.6)   | 0.75<br>(19.0)                 | 0.205<br>(5.2)               |

## Dimensions inches (mm)



## Terminal Options inches (mm)



## Ordering Information

| DC             |                                    | 3               |  |
|----------------|------------------------------------|-----------------|--|
| Series/Prefix  |                                    |                 |  |
| Code           | UL Rating                          | EN 61058 Rating |  |
| 1              | 5A, 125/250VAC<br>1A 48VDC         | 6A, 250V~       |  |
| 2              | 10.1A, 125/250VAC<br>1/4HP, 125VAC | 10(1.5)A, 250V~ |  |
| 3              | 0.1A, 125/250VAC<br>0.1A 30VDC**   | 0.1A, 250V~     |  |
| 4 <sup>4</sup> | 3A, 250VAC<br>1A 48VDC             | 3A, 250V~       |  |

| Contact Configuration      |         |                       |         |
|----------------------------|---------|-----------------------|---------|
| +105°/120°C Operating Temp |         | +85°C Operating Temp* |         |
| Code                       |         | Code                  |         |
| A                          | SPST NO | E                     | SPST NO |
| B                          | SPST NC | F                     | SPST NC |
| C                          | SPDT    | G                     | SPDT    |

| G    |                             | B     |  |
|------|-----------------------------|-------|--|
| Code | Terminal Type inches (mm)   | Notes |  |
| A    | Short Solder                | 1     |  |
| B    | 0.02" (0.5") Leads (No UL)  | 5, 9  |  |
| C    | 0.03" (0.75") Leads (No UL) | 5     |  |
| H    | 0.05 x 0.02 (1.3 x 0.5) PCB | 1     |  |
| K    | 0.02 x 0.02 (0.6 x 0.5) PCB | 1, 7  |  |
| L    | 0.11 x 0.02 (2.8 x 0.5) QC  | 1     |  |
| N    | Without Leads (Type B)      | 6     |  |
| P    | Without Leads (Type A)      | 6     |  |
| Q    | Without Leads (No Cut-Out)  | 8     |  |
| S    | Welding                     | 1     |  |
| T    | Leads, 20 AWG               | 3, 11 |  |
| U    | Leads, 22AWG                | 9, 11 |  |

| Non-European Versions |                           |          |
|-----------------------|---------------------------|----------|
| Code                  | Terminal Type inches (mm) | Notes    |
| D                     | Leads 18 AWG (UL Only)    | 5, 8, 10 |
| E                     | Leads 16 AWG (UL Only)    | 5        |
| M                     | Leads 20 AWG (UL Only)    | 3, 5     |

| 3              |                     | L    |             | C            |              |                              |   |
|----------------|---------------------|------|-------------|--------------|--------------|------------------------------|---|
| Code           | Actuator Type       | Code |             |              |              | Actuation Length inches (mm) |   |
|                |                     | A    | B           | C            | D            |                              |   |
| AA             | Button only         | —    | —           | —            | —            | —                            | — |
| L              | Lever               | —    | 0.189 (4.8) | 0.276 (7.0)  | 1.654 (42.0) | —                            | — |
| R              | Roller              | —    | 0.098 (2.5) | 0.185 (4.7)  | 1.563 (39.7) | —                            | — |
| S              | Simulated Roller    | —    | 0.098 (2.5) | 0.185 (4.7)  | 1.563 (39.7) | —                            | — |
| V <sup>2</sup> | Plastic Sim. Roller | —    | 0.220 (5.6) | —            | —            | —                            | — |
| W <sup>2</sup> | Plastic Straight    | —    | 0.276 (7.0) | 0.551 (14.0) | —            | —                            | — |
| Z <sup>2</sup> | Plastic with Roller | —    | 0.205 (5.2) | —            | —            | —                            | — |

| Code | Terminal Configuration                           |
|------|--|
| 1    | 30° Twisted                                      |
| 3    | Leads on Actuator Side                           |
| 4    | Leads on Opposite Side from Actuator             |
| 5    | Leads Attached to Underside                      |
| 6    | PCB Terminals Right-hand Side                    |
| 7    | PCB Terminals Left-hand Side                     |
| 8    | PCB Terminals Right-hand Side with Location Pins |
| 9    | PCB Terminals Left-hand Side with Location Pins  |

\* 85°C versions use plastic levers  
\*\* 30VDC UL rating applies only to 120C version

### Notes:

Wire leads 500mm min. (approximately 20" long)

- Only available with terminal configuration 1.
- +85°C rated only.
- Only available with DC1, DC3 and DC4.
- Rating code 4 only as lead-version — leads 0.5mm<sup>2</sup>.
- Wire versions only rated to +105°C.
- Only available with terminal configuration 3 or 4.

- Only available with terminal configuration 1, 6, 7, 8 or 9.
- Only available with terminal configuration 5.
- Only available with DC3 and DC4.
- Not available with DC2.
- Not available in North America.